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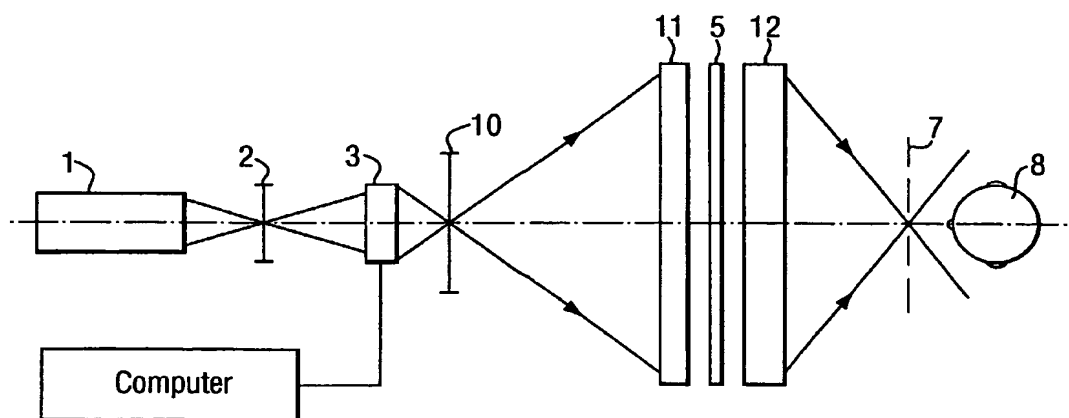
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(54) Title: RECONFIGURABLE SPATIAL LIGHT MODULATORS



(57) Abstract: This invention relates to reconfigurable spatial light modulators (SLM) incorporating a scatter plate (5). Computer generated diffraction patterns or holograms may be loaded on the (SLM) either as a single frame or as a series of frames for observation by an observer. In a preferred embodiment both an electrically addressable spatial light modulator (EASLM) and an optically addressable spatial light modulator (OASLM) are used. The (OASLM) may be formed of several smaller (OASLMs) arranged in a matrix format. The faster (EASLM) forms a light pattern on sub-areas of the large (OASLM) in turn to give a large display. The scatter plate (5) is arranged at the output of the (SLM) nearest an observer. This scatter plate has a known characteristic and serves to increase the field of view and/or reduce the number of pixels required to give a holographic or two dimensional displays. Prior to producing a display, the diffraction patterns, holograms, or image in the computer is modified to take account of the properties of the scatter plate; a modified computer generated diffraction pattern, hologram, or image is then displayed to an observer. The system may also be used for optical switching.

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